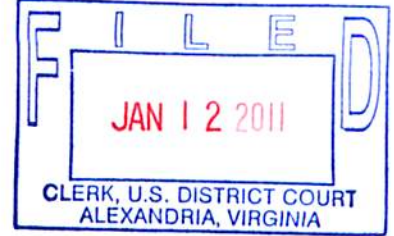IN THE UNITED STATES DISTRICT COURT FOR THE
EASTERN DISTRICT OF VIRGINIA
Alexandria Division

TECSEC, INC.   )
)
         Plaintiff,   )
)
   v.   )   1:10cv115(LMB/TCB)
)
INTERNATIONAL BUSINESS MACHINES   )
CORP., et al.,   )
)
         Defendants.   )

<u>MEMORANDUM OPINION</u>

Before the Court are the parties' cross-motions for summary judgment concerning the defendant's affirmative defenses of invalidity and inequitable conduct [Dkt. Nos. 392 and 399]. For the reasons explained below, defendant IBM's Motion for Summary Judgment of Inequitable Conduct and Invalidity [Dkt. No. 392] will be denied in all respects by an Order to be issued with this Memorandum Opinion. The Court will defer ruling on the majority of plaintiff TecSec's Motion for Summary Judgment on Defendant's Affirmative Defenses of Invalidity and Inequitable Conduct [Dkt. No. 399], but will deny TecSec's Motion for Summary Judgment to the extent that TecSec seeks summary judgment that Roy Follendore is not an inventor of the '702 (DCOM) family of patents, or that IBM cannot prove inequitable conduct with respect to the '702 patent family. Those issues present genuine disputes of material fact between the parties, and must therefore be resolved at trial.

I. Background

The plaintiff in this patent infringement case, TecSec, Inc. ("TecSec"), is a Virginia corporation with its principal place of business in McLean, Virginia. TecSec's primary business is the development of encryption and security techniques; it has designed, developed, and sold a number of cryptography and security-related products since its founding in 1990, and has been awarded more than thirty United States patents in the field of encryption. See Second Amend. Compl. ¶¶ 20-25.

In this civil action, TecSec asserts that defendant International Business Machines Corporation ("IBM") and several other named defendants have infringed one or more of the claims of six of its patents, in violation of 35 U.S.C. § 271 et seq.[1] Specifically, TecSec's Second Amended Complaint, filed on July 6, 2010, asserts infringement of the following three groups of patents:

> 1. United States Patent No. 5,369,702 ("the '702 patent"), issued on November 29, 1994; United States Patent No. 5,680,452 ("the '452 patent"), issued on October 21, 1997; United States Patent No. 5,717,755 ("the '755 patent"), issued on February 10, 1998; and United States Patent No. 5,898,781 ("the '781 patent"),

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[1] TecSec's Second Amended Complaint names IBM, SAS Institute, Inc., SAP America, Inc., SAP AG, Cisco Systems, Inc., Oracle America, Inc., Sybase, Inc., Software AG, Inc., Software AG, Adobe Systems Incorporated, eBay Inc., PayPal Inc., and Oracle Corporation as defendants. However, in an Order dated June 4, 2010, this Court stayed the litigation as to all defendants except IBM and eBay, Inc., and the Second Amended Complaint was dismissed without prejudice as to defendant eBay, Inc. on August 27, 2010. Accordingly, the case is proceeding only against defendant IBM at this time.

issued on April 27, 1999. All four patents deal with the "Distributed Cryptographic Object Method" for data encryption and are collectively referred to as "the DCOM patents" or "the '702 patent family."

2. United States Patent No. 6,694,433 ("the '433 patent"), issued on February 17, 2004, dealing with an "Extensible Markup Language (XML) encryption scheme," and alternatively referred to as "the XML patent."

3. United States Patent No. 7,069,448 ("the '448 patent"), issued on June 27, 2006, dealing with "Context Oriented Crypto- Processing on a Parallel Processor Array," and alternatively referred to as "the Parallel Processor patent."

Id. ¶ 1. Plaintiff seeks relief in the form of a permanent injunction enjoining the defendants and all of their affiliates from infringing the patents-in-suit, along with an award of all appropriate damages, including treble damages for defendants' alleged willful infringement, and attorneys' fees and costs pursuant to 35 U.S.C. § 285.

On August 16, 2010, IBM filed its First Amended Answer, which includes a number of affirmative defenses. IBM asserts, inter alia, that the four DCOM patents are unenforceable due to inequitable conduct committed by the applicant, M. Greg Shanton ("Shanton"), and his attorneys before the United States Patent and Trademark Office ("PTO") in failing to disclose the alleged role of a former TecSec employee, Roy D. Follendore, III ("Follendore"), in inventing the DCOM encryption methods set forth in the '702 patent family. See IBM's First Amend. Answer and Affirmative Defenses to Pl. TecSec's Second Amend. Compl. ("Def.'s First Amend. Answer") at 34-41. IBM also contends that the

patentee and his attorneys engaged in inequitable conduct in connection with the '433 (XML) patent by failing to disclose prior art regarding XML digital signature technology, and that they engaged in inequitable conduct relating to the '488 (Parallel Processor) patent by failing to disclose prior art references concerning a Motorola AIM chip to the PTO, and by falsely claiming small entity status to avoid paying the required fees. See id. at 41-49. Additionally, IBM asserts that the '433 patent and the '448 patent are invalid because they were anticipated by various prior art, and that certain claims in the '433 patent do not comply with the written description requirement of 35 U.S.C. § 112. See id. at 32-34. Accordingly, IBM argues that all of the patents-in-suit in this case are invalid and unenforceable.

On November 15, 2010, the parties filed their cross-motions for summary judgment solely on the issue of defendant's asserted defenses of inequitable conduct and invalidity. This Memorandum Opinion will primarily address the issues raised in IBM's affirmative Motion for Summary Judgment of Inequitable Conduct and Invalidity [Dkt. No. 392], along with any relevant claim construction.[2] In the briefing in support of its Motion for

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[2] Because the resolution of IBM's Motion for Summary Judgment more directly affects the parties' preparation for the next round of summary judgment motions, the Court has chosen to address IBM's motion first. A later Memorandum Opinion will address the remaining issues raised in plaintiff TecSec's Motion for Summary Judgment on Defendant's Affirmative Defenses of Invalidity and Inequitable Conduct [Dkt. No. 399]. However, the Court will resolve the claim construction issues addressed in TecSec's affirmative Motion for Summary Judgment in this

Summary Judgment, IBM argues that it is entitled to summary

judgment that the '702 patent family is unenforceable because of

TecSec's inequitable conduct in withholding material information

from the PTO Examiner and falsely claiming that Shanton was the

sole inventor of the patents. See IBM's Brief in Supp. of its

Mot. for Summ. J. of Inequitable Conduct and Invalidity ("Def.'s

Mot. for Summ. J.") at 12-30. IBM also contends that claims 1-12

of the '433 (XML) patent are invalid, because claims 1-8 and 10-11

of that patent are anticipated by U.S. Patent No. 7,010,681

("Fletcher"), and because claims 9 and 12 failed to comply with

the written description requirement of 35 U.S.C. § 112. See id.

at 31-40. Finally, IBM seeks summary judgment that claims 1-18 of

the '448 (Parallel Processor) patent are invalid because they are

anticipated by U.S. Patent No. 7,600,131 ("Krishna"). See id. at

41-59.[3]

Memorandum Opinion, as those issues may affect the arguments made
by the parties in the next round of motions, which will focus on
TecSec's allegations of infringement. Moreover, the Court will
deny TecSec's Motion for Summary Judgment to the extent that
TecSec seeks a judgment in its favor on IBM's inequitable conduct
allegations relating to the '702 (DCOM) family of patents.
Finally, as explained below, the Court will grant summary
judgment as a matter of law in TecSec's favor on IBM's asserted
defenses of invalidity of the '433 patent due to alleged
anticipation by Fletcher and failure to comply with the written
description requirement of 35 U.S.C. § 112, and IBM's asserted
defense of invalidity of the '448 patent due to alleged
anticipation by Krishna.

[3] IBM's Motion for Summary Judgment thus seeks summary
judgment on only a small subset of the issues and affirmative
defenses raised in its First Amended Answer. Compare Def.'s
First Amend. Answer (raising myriad affirmative defenses,
including inequitable conduct, invalidity, anticipation,
acquiescence, estoppel, release, and implied license) to Def.'s

For the reasons explained below, the Court will deny defendant IBM's Motion for Summary Judgment in all respects, and will in fact grant summary judgment in TecSec's favor on the issues raised by IBM with regard to the '433 and '448 patents. The Court will deny summary judgment for either party on the matter of the alleged unenforceability of the '702 family of patents due to inequitable conduct, and that issue will proceed to trial so that the jury may resolve the genuine and material factual disputes between the parties.

II. Standard of Review

Summary judgment is appropriate where the record demonstrates "that there is no genuine issue as to any material fact and that the moving party is entitled to judgment as a matter of law." Fed. R. Civ. P. 56©. A genuine issue of material fact exists "if the evidence is such that a reasonable jury could return a verdict for the nonmoving party." Anderson v. Liberty Lobby, Inc. 477 U.S. 242, 247-48 (1986). The Court must view the record in the light most favorable to the nonmoving party. See Bryant v. Bell Atl. Md., Inc., 288 F.3d 124, 132 (4th Cir. 2002). However, the "mere existence of a scintilla of evidence in support of the [nonmovant's] position will be insufficient; there must be

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Mot. for Summ. J. (raising only four arguments: that the '702 patents are unenforceable due to inequitable conduct in failing to disclose the true inventor; that the '433 patent is invalid because it was anticipated by Fletcher; that certain claims of the '433 patent do not comply with the written description requirement; and that the '448 patent is invalid because it was anticipated by Krishna).

evidence on which the jury could reasonably find for the [nonmovant]." Anderson, 477 U.S. at 252; see also Othentec Ltd. v. Phelan, 526 F.3d 135, 140 (4th Cir. 2008).

Thus, if a nonmoving party bears the burden of proof on a claim at trial, the moving party may prevail on its Rule 56 motion by showing that there is a lack of evidence to carry the other party's burden as to any essential element of the cause of action. See Celotex Corp. v. Catrett, 477 U.S. 317, 322-23 (1986); Cray Commc'ns Inc. v. Novatel Computer Sys., Inc., 33 F.3d 390, 393-94 (4th Cir. 1994). Once the moving party has met its burden of demonstrating the absence of an issue of material fact, the party opposing summary judgment may not rest on mere allegations or inferences, but must instead proffer specific facts or objective evidence showing that a genuine issue of material fact exists requiring further proceedings. Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574, 586 (1986).

III. Discussion

A. Claim Construction

In the briefing on their cross-motions for summary judgment, the parties raised the issue of the proper construction of the term "object" as it is used in the '702 (DCOM) patents. In particular, the parties offer different interpretations of that term as it relates to "object encryption" and the "object-oriented key managers" described in those patents. Specifically, IBM argues that "object" means "any distinct, separate entity," while

TecSec proposes a definition of "object" as *necessarily* sub-file level data" that must be "nested in other data." Compare IBM's Opp. to Pl. TecSec's Mot. for Partial Summ. J. at 5-13 to Br. in Supp. of Pl. TecSec's Mot. for Partial Summ. J. on Def.'s Affirmative Defenses of Invalidity and Inequitable Conduct at 18 (emphasis added).

The district court has the "power and obligation to construe as a matter of law the meaning of language used in the patent claim." Markman v. Westview Instruments, Inc., 52 F.3d 967, 979 (Fed. Cir. 1995), aff'd, 517 U.S. 370 (1996). As a starting point, a claim term is to be given the "ordinary and customary meaning" it would have had to a person of ordinary skill in the art at the time of the invention. Phillips v. AWH Corp., 415 F.3d 1303, 1312-13 (Fed. Cir. 2005) (en banc); see also Dow Chemical Co. v. Sumitomo Chem. Co., Ltd., 257 F.3d 1364, 1372 (Fed. Cir. 2001). To determine that meaning, the court must first look to how the words of the claims themselves define the scope of the patented invention, and then look to "those sources available to the public that show what a person of skill in the art would have understood [the] disputed claim language to mean." Phillips, 415 F.3d at 1314; see also Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582-83 (Fed. Cir. 1996). The court must construe the entire claim, including any preamble, so long as it gives life and meaning to the invention claimed. See Pitney Bowes, Inc. v. Hewlett-Packard Co., 182 F.3d 1298, 1305 (Fed. Cir. 1999).

For some claim terms, the ordinary meaning may be readily apparent, and construction of those terms therefore "involves little more than the application of the widely accepted meaning of commonly understood words." Phillips, 415 F.3d at 1314. If technical terms are used, the court may also "consult scientific dictionaries and technical treaties at any time" because "technical terms often have an 'ordinary meaning' as understood by one of skill in the art, although these same terms may not be readily familiar to a judge, or may be familiar only in a different context." Dow Chemical, 257 F.3d at 1372. The meaning of a disputed claim term should be resolved primarily in light of the "intrinsic evidence of record, i.e., the patent itself, including the claims, its specification and, if in evidence, the prosecution history." Vitronics, 90 F.3d at 1582 (describing intrinsic evidence as "the most significant source of the legally operative meaning of disputed claim language"); see also Phillips, 415 F.3d at 1316 (holding that "[t]he construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction"). Intrinsic evidence may not be read, however, to add an extraneous limitation to a claim. See Comarck Commc'ns, Inc. v. Harris Corp., 156 F.3d 1182, 1186 (Fed. Cir. 1998); E.I. du Pont de Nemours & Co. v. Phillips Petroleum Co., 849 F.2d 1430, 1433 (Fed. Cir. 1988).

The parties in this case dispute the meaning of "object" in

claim 1 of the '702 patent, which describes:

> A method for providing multi-level multimedia security in a data network, comprising the steps of:
>
> A) accessing an object-oriented key manager;
> B) selecting an object to encrypt;
> C) selecting a label for the object;
> D) selecting an encryption algorithm;
> E) encrypting the object according to the encryption algorithm;
> F) labelling [sic] the encrypted object;
> G) reading the object label;
> H) determining access authorization based on the object label; and
> I) decrypting the object if access authorization is granted.

Ex. A3 ('702 patent) at 12:2-15. For the reasons explained below, the term "object" will be construed to mean "any distinct, separate entity." That definition includes, but is not limited to, files, sub-files, documents, text, and other types of data entities, some of which maybe nested in other data.

This interpretation is fully consistent with how the patentee defined "object" in the '702 patent specification and during patent prosecution. It is well established that "[t]he patentee is free to act as his own lexicographer, and may set forth any special definitions of the claim terms in the patent specification or file history, either expressly or impliedly." Schoenhaus v. Genesco, Inc., 440 F.3d 1354, 1358 (Fed. Cir. 2006); see also Irdeto Access, Inc. v. Echostar Satellite Corp., 383 F.3d 1295, 1300 (Fed. Cir. 2004); Home Diagnostics, Inc. v. LifeScan, Inc., 381 F.3d 1352, 1356 (Fed. Cir. 2004). In this case, as part of the "Summary of the Invention" section of the patent

specification, the patentee explained that "[i]n the context of the present invention, an object can come in a vast number of forms, shapes, or sizes." Ex. A3 at 3:43-44. By way of specific example, the patentee stated that:

> Examples of what an object can be include a bit of information, a byte of information, Sound Clips, Video Clips, Graphic Images, text, charts, tables, forms, controls, MDI-Forms, variables, executable files, video files, binary files, text files, data files, container files, graphic files, application file(s), Library files, a directory, a collection of directories, a hard disk, multiple hard disks, any hardware component, any software component, a complete computer system, a single network, [and] multiple networks.

Id. at 3:47-57. In light of the breadth of the examples provided, the '702 patent specification defines the term "object" as "any distinct, separate entity," indicating that:

> Thus, an object is any distinct, separate entity. In a computer or data communication context, entities that may be treated as objects include:
>
> 1) Program objects, representing applications such as word processors, spreadsheets, games, etc., as well as utilities and operating systems;
>
> 2) Folder objects, representing collections of other objects;
>
> 3) Data file objects, including information such as text, memos, letters, spreadsheets, video, and sound; and
>
> 4) Device objects, such as printers, fax modems, plotters, and CD-ROM drives.

Id. at 3:58-4:2.

Construing "object" to mean "any distinct, separate entity" is also consistent with the prosecution history of the '702 patent. To obtain allowance of the claims during patent prosecution, the patentee specifically referred to relevant

11

technical dictionaries defining "object" as "any distinct, separate entity." For example, the PTO originally rejected claim 1 as indefinite because the examiner noted that "it is unclear what is meant by each use of the word 'object.'" Ex. D3 at IBMTS002635653. To overcome this objection, the '702 patentee amended the specification to define the claimed "object" as "any distinct, separate entity," explaining that that definition was "well known to those of ordinary skill in the art." Id. at IBMTS002635672. In support of that argument, the patentee expressly cited to Peter Dyson's The PC User's Essential Accessible Pocket Dictionary (hereinafter "Dyson dictionary"). Id.; see also Ex. D2 at 374 (Dyson dictionary definition of "object" as "[a]ny distinct, separate entity"). In view of the supplemented definition, the PTO withdrew its rejection of claim 1 of the '702 patent. Ex. D3 at IBMTS002635680.

The patentee's stated definition of "object" thus constitutes an express definition for purposes of claim construction, and it is black-letter law that the patentee's definition conclusively governs. See Medrad, Inc. v. MRI Devices Corp., 401 F.3d 1313, 1318 (Fed. Cir. 2005) ("A patentee may define a particular term in a particular way, and in that event the term will be defined in that fashion for purposes of that particular patent, no matter what its meaning in other contexts.") (citation omitted); see also Honeywell Int'l, Inc. v. Universal Avionics Sys. Corp., 493 F.3d 1358, 1361 (Fed. Cir. 2007) ("When a patentee defines a claim

term, the patentee's definition governs.").[4] As demonstrated by the dictionary citation, such a construction of the term "object" also accords with the ordinary and customary meaning of the term to persons skilled in the art at the time of the invention.

Finally, that definition is consistent with how TecSec itself defined "object" in prior litigation relating to the '702 patent. For example, in the <u>Protegrity</u> infringement case, TecSec argued in its claim construction brief that:

> The term "object" is properly construed to mean any distinct, separate entity.

> The plain meaning of the term "object" is any distinct entity. The patent confirms that an object is "any distinct, separate entity." *Col. 3:58.* "Objects are entities by themselves, but they may contain other objects, in either single or multiple configurations." *Col. 3:35-37.* The patent adds that "an object can be any user-selected group of data." *Col. 4:3-4.* . . .

> Dr. Maier confirms that the term "object" is understood to mean a distinct, separate entity." *Maier Decl.,* ¶ 17. The technical definition is consistent: "a variable comprising both routines and data that is treated as a discrete entity." *Id.*

Ex. D5 (TecSec's Claim Construction Brief in <u>TecSec Inc. v. Protegrity, Inc.</u>, No. 2:01cv233, (E.D. Va.)) at 10. For all those reasons, the Court will construe the term "object" to mean "any distinct, separate entity."

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[4] The patentee's proffered definition in the '702 patent specification and the prosecution history applies with equal force to the use of that term in the rest of the '702 (DCOM) patent family. <u>See</u> <u>Goldberg v. Cytogen, Inc.</u>, 373 F.3d 1158, 1167 (Fed. Cir. 2004); <u>Microsoft Corp. v. Multi-Tech Sys., Inc.</u>, 357 F.3d 1340, 1349 (Fed. Cir. 2004).

That definition can thus embrace a broad range of distinct digital entities, including files, folders, sub-files, images, and even single lines of text. The Court rejects, however, TecSec's suggested definition that an object is *necessarily* sub-file level data" that *must* be "nested in other data." See Br. in Supp. of Pl. TecSec's Mot. for Partial Summ. J. on Def.'s Affirmative Defenses of Invalidity and Inequitable Conduct at 18 (emphasis added). TecSec's narrow definition is inconsistent with the intrinsic evidence discussed above, and with the many examples of "objects" provided in the patent specification, which includes numerous examples of documents and other complete files, in addition to some sub-file level data. See Ex. A3 at 3:51-53 (describing "executable files, video files, binary files, text files, data files, container files, graphic files, application file(s), [and] Library files" as examples of "objects"); see also id. at 5:3-7 (distinguishing between "container" and "non-container" objects). It also contradicts the deposition testimony of the named inventor, Shanton, who confirmed during questioning that a file can qualify as an object in accordance with the DCOM invention. See Ex. D4 at 114:13-14 ("Q: Is a file an object? A: Yes."). TecSec's definition of "object" thus does not square with the record and must be rejected. See, e.g., Oatey Co. v. IPS Corp., 514 F.3d 1271, 1276-77 (Fed. Cir. 2008) ("We normally do not interpret claims in a way that excludes embodiments disclosed in the specification. . . . At least where claims can reasonably

[be] interpreted to include a specific embodiment, it is incorrect

to construe the claims to exclude that embodiment, absent

probative evidence [to] the contrary.") (citations omitted).[5]

B. IBM's Motion for Summary Judgment of Inequitable Conduct Relating to the '702 Patent Family

The primary argument that IBM advances in its Motion for

Summary Judgment is that all of the '702 (DCOM) patents are

unenforceable because of inequitable conduct by the named

inventor, Shanton, and his attorneys during the patent prosecution

process. Def.'s Mot. for Summ. J. at 12. Specifically, IBM

argues that Shanton and his attorneys withheld material

information regarding inventorship from the PTO Examiner during

prosecution of the '702 patent family, and also submitted false

declarations from Shanton with the intent to deceive the PTO into

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[5] In its Reply Brief, TecSec raised, for the first time, the argument that its preferred reading of the '702 patent could also be achieved by construing "multi-level security" to mean something like "encryption of data at multiple levels, including the sub-file level" or "multiple levels of security achieved by encrypting objects, nesting encrypted objects within other objects, and labeling objects, providing an access hierarchy." See Reply Br. in Supp. of Pl. TecSec's Mot. for Partial Summ. J. on Def.'s Affirmative Defenses of Invalidity and Inequitable Conduct at 3-5; see also Ex. D5 (TecSec's Claim Construction Brief in TecSec Inc. v. Protegrity, Inc. (No: 2:01cv333)) at 6. The Court declines to offer a construction of "multi-level security" at this time, without an affirmative motion by TecSec to do so and without having received formal briefing from IBM on that point. The Court will, however, address TecSec's arguments that the '702 (DCOM) patents are distinguishable from Follendore's invention because they allow for multi-level security and the encryption of nested objects; that argument will be addressed in the Court's discussion of IBM's inequitable conduct allegations. See infra, Part III.B.

believing that Shanton was the sole inventor of the claimed subject matter. Id. at 13-30. IBM contends that, contrary to TecSec's representations to the PTO Examiner, one of TecSec's former employees, Roy Follendore, was in fact an inventor of the technology claimed in the '702 patents; at the very least, IBM argues, Follendore should have been listed as a co-inventor on the '702 patent application because he substantially contributed to the development of the encryption technology described therein. Id.

To prevail on an affirmative defense of inequitable conduct, IBM must meet a very high burden. The Federal Circuit has repeatedly indicated that inequitable conduct defenses are disfavored, particularly at the summary judgment stage. See Leviton Mfg. Co. v. Universal Sec. Instruments, Inc., 606 F.3d 1353, 1358 (Fed. Cir. 2010) ("We rarely affirm a grant of summary judgment of inequitable conduct, and in those cases where we have affirmed, the applicants did something other than fail to disclose a commonly owned application or related litigation."); see also Burlington Indus. Inc. v. Dayco Corp., 849 F.2d 1418, 1422 (Fed. Cir. 1998) (declaring that "the habit of charging inequitable conduct in almost every major patent case has become an absolute plague"). Accordingly, a party asserting inequitable conduct must prove by *clear and convincing evidence* that the applicant or his attorneys breached a duty of candor and good faith by failing to disclose material information or submitting materially false

16

information to the PTO, *and* that the failure to disclose or the submission of materially false statements was done with an intent to mislead or deceive the patent examiner. Advanced Magnetic Closures, Inc. v. Rome Fastener Corp., 607 F.3d 817, 829 (Fed. Cir. 2010).

In the context of an inequitable conduct claim, intent to deceive can sometimes be "inferred from the facts and circumstances surrounding the conduct at issue." Cargill, Inc. v. Canbra Foods, Ltd., 476 F.3d 1359, 1364 (Fed. Cir. 2007) (citations omitted). However, summary judgment on an allegation of inequitable conduct is only available if there is clear and convincing evidence of "a failure to supply highly material information *and* if the summary judgment record establishes that (1) the applicant knew of the information; (2) the applicant knew or should have known of the materiality of the information; and (3) the applicant has not provided a credible explanation for the withholding." Ferring B.V. v. Barr Labs, Inc., 437 F.3d 1181, 1191 (Fed. Cir. 2006) (emphasis added). Moreover, at the summary judgment phase, intent to deceive the PTO cannot simply be one inference that can be drawn from the facts. Rather, it must be "the single most reasonable inference able to be drawn from the evidence to meet the clear and convincing standard." Star Scientific, Inc. v. R.J. Reynolds Tobacco Co., 537 F.3d 1357, 1366-67 (Fed. Cir. 2008).

In this case, IBM has presented evidence raising several

17

significant questions as to whether Shanton and his attorneys were fully forthcoming during prosecution of the '702 family of patents. According to IBM, Follendore was one of the pioneering developers of an "object-oriented key management" software method of encryption, which he developed and refined while at TecSec in the early 1990s. See Def.'s Mot. for Summ. J. at 13-16 (describing and citing internal TecSec communications between Follendore and others regarding object-oriented key management encryption). In fact, Follendore was awarded a patent for that technology, U.S. Patent 5,369,707 ("the '707 patent"), based on an application filed with the PTO on January 27, 1993. See Ex. A1. That application thus clearly pre-dates the applications for the '702 family of patents.[6]

Moreover, Follendore's '707 patent, like the '702 family of patents, deals with a "method and apparatus for ensuring the security of messages communicated on a network" by labeling, encrypting, and storing digital data "to ensure that communication integrity is not breached." Ex. A1 (Abstract). Although the parties dispute the nuances of the various similarities and differences in the encryption methods disclosed by the '707 patent and the '702 patent family, the patents do contain some strikingly similar language in several of their claims. For example, claim 1

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[6] The applications that led to Shanton's '702 patent, '755 patent, '452 patent, and '781 patent (collectively, "the '702 patent family") were filed with the PTO on October 18, 1993, September 13, 1994, February 24, 1995, and September 10, 1997, respectively. See Exs. A3-A10.

of Follendore's '707 patent claims, <u>inter alia</u>:

B) the first digital logic means comprising

1) a first system memory for storing data; . . .

4) a message header labelling [sic] subsystem, comprising logic for limiting system access, subject to label conditions, the message header labelling [sic] subsystem being electronically connected to the first system memory for accessing data stored in the first system memory and the message header labelling [sic] subsystem being further electronically connected to the encryption algorithm module to accept inputs from the encryption algorithm module; and . . .

C) the second digital logic means comprising . . .

3) a decryption algorithm module, comprising logic for converting encrypted text messages into plain text messages, the decryption algorithm module being electronically connected to the second system memory for accessing data stored in the second system memory . . .

4) a message header identification subsystem, comprising logic for limiting system access, subject to label conditions, the message header identification subsystem being electronically connected to the second system memory for accessing data stored in the second system memory and the message header identification subsystem being further electronically connected to the decryption algorithm module to accept inputs from the decryption algorithm module; and . . .

E) the message header identification subsystem limiting access to an incoming message prior to conversion of a received encrypted text message into plain text message.

Ex. A1 at 15:39-16:42; <u>see also</u> Ex. A11 (matching those elements to

the '702 patent in respective highlighted colors). Similarly, claim

8 of the '702 patent claims:

A) digital logic means, the digital logic means comprising

19

1) a system memory means for storing data; . . .

3) an object labelling [sic] subsystem, comprising
logic means for limiting object access, subject to
label conditions, the object labelling [sic] subsystem
being electronically connected to the first system
memory for accessing data stored in the system memory
and the object labelling [sic] subsystem being further
electronically connected to the encryption algorithm
module to accept inputs from the encryption algorithm
module;

4) a decryption algorithm module, comprising logic
for converting encrypted objects into unencrypted
objects, the decryption algorithm module being
electronically connected to the system memory means for
accessing data stored in the system memory means; and

5) an object label identification subsystem,
comprising logic for limiting object access, subject to
label conditions, the object label identification
subsystem being electronically connected to the system
memory means for accessing data stored in the system
memory means and the object label identification
subsystem being further electronically connected to the
decryption algorithm module to accept inputs from the
decryption algorithm module;

B) the encryption algorithm module working in
conjunction with the object labelling [sic] subsystem
to create an encrypted object such that the object
label identification subsystem limits access to an
encrypted object.

Ex. A3 at 12:47-13:19; see also Ex. A11 (matching those elements to

Follendore's '707 patent in respective highlighted colors).

Despite those and other similarities, Shanton and his

attorneys did not specifically disclose Follendore's '707 patent

application as material prior art during their prosecution of the

'702 family of patents, nor did they ever indicate to the PTO that

Follendore might later raise a claim to inventorship or co-

inventorship of the subject matter described in the '702 DCOM

patents. Rather, Shanton represented that he was the *sole* inventor of the technology claimed in the '702 family of patents. See Ex. A7 at IBMTS-0000219-20; Ex. A9 at IBMTS-002635789-90 (Shanton's sworn declarations to the PTO stating that he believed himself to be the "original, first, and sole inventor" of the DCOM technology described in the '702 family of patents). Indeed, Shanton's attorneys, Jon L. Roberts and Thomas Champagne, represented Shanton to be the sole inventor of those patents throughout the '702 patent prosecution process, despite the fact that they had previously prosecuted Follendore's '707 patent application, see Exs. A1-A2, and had received some communications from Follendore indicating that he might be claiming joint inventorship of the '702 patent family, see, e.g., Ex. A34 at HK2025682-83 (letter from Follendore's attorney to Roberts disputing inventorship and ownership rights).

Taken together, IBM's evidence regarding TecSec's conduct during its '702 patent prosecution raises significant concerns. The proper inventorship of a claimed invention is highly material to patentability, and misrepresentations regarding inventorship, if true, could easily render a patent unenforceable due to inequitable conduct. See Advanced Magnetic, 607 F.3d at 830 (citing PerSeptive Biosystems, Inc. v. Pharmacia Biotech, Inc., 225 F.3d 1315, 1321 (Fed. Cir. 2000)); see also Leviton, 606 F.3d at 1360 (holding that representations regarding inventorship can be material). Likewise, the copying of claims from another's patent application without

disclosing that to the PTO Examiner raises significant suspicions of invalidity or inequitable conduct. See Leviton, 606 F.3d at 1360 ("Had the examiner been aware that different Leviton employees each claimed to be first inventors of the same subject matter recited in the same claims, it would have raised serious questions regarding inventorship - an issue that is clearly material to patentability.").

However, at this stage of the litigation, IBM cannot carry its burden to establish inequitable conduct by clear and convincing evidence. The Federal Circuit has consistently held that "without some type of corroborating evidence, an alleged inventor's testimony cannot satisfy the 'clear and convincing evidence' standard." Price v. Symsek, 988 F.2d 1187, 1194 (Fed. Cir. 1993); see also Hess v. Advanced Cardiovascular Sys., Inc., 106 F.3d 976, 980 (Fed. Cir. 1997). In this case, IBM's arguments rest to a considerable degree on the testimony of Follendore himself, who alleges that he invented the DCOM technology and should have been credited as an inventor of the '702 DCOM patents. See Ex. A23 (Follendore deposition). Follendore, however, is a former TecSec employee who was previously involved in litigation against TecSec over the rights to another product TecSec was developing, called "NetShield"; in fact, TecSec alleges that in the course of that dispute, Follendore unlawfully removed the NetShield software code from various TecSec computers in an effort to obtain leverage over TecSec and to improve his bargaining position during settlement

negotiations. See Pl.'s Br. in Opp. at 28-29; see also Ex. B-7 at 182:21-183:20 (testimony from Follendore admitting that he cleared software code from Shanton's computer). Follendore thus comes to this case with potentially serious credibility baggage.

Moreover, IBM's efforts to rely on the contemporaneous documentary evidence in this case also fail to establish inequitable conduct by clear and convincing evidence, at least at the summary judgment stage. IBM argues that various documents, such as a "2020 Paper" authored by Follendore, a PowerPoint presentation regarding NetShield, a NetShield Feasibility Study, and e-mails to and from Follendore describing a technological development called "OOKeyMan" conclusively demonstrate that Follendore invented the DCOM technology claimed in the '702 patent application *before* that application was filed. See Def.'s Mot. for Summ. J. at 13-19. The core of IBM's argument reduces to the following set of assertions: because many of the contemporaneous documents that Follendore authored contain references to "OOKeyMan," an acronym which stands for "object-oriented key management" encryption, and because the patents in the '702 patent family also refer to "object-oriented key managers," it necessarily follows that Follendore invented the technology claimed in the '702 patents.

However, as TecSec responds, those arguments may very well be based upon a flawed factual premise. Specifically, the documentary evidence suggests that "OOKeyMan" and the DCOM ("Distributed

23

Cryptographic Object Method") system of encryption are not always synonymous. Rather, the term "OOKeyMan" was a trademark registered by TecSec in 1996, which TecSec then used to identify multiple "computer *programs*" for "security and privacy of files and data on a computer system or network." Ex. A-9 at HK0025529-30 (emphasis added); see also Ex. B-4 at 268:5-21 (explaining the many different ways in which TecSec used the term "OOKeyMan"). OOKeyMan thus appears to be a generic, umbrella acronym that was employed by TecSec to describe its products in various marketing schemes; indeed, TecSec even developed a caveman-type cartoon character called "OOKeyMan," which it used as an image in TecSec presentations and as a figurine that it left behind after those presentations concluded. See Ex. B-8 at 86:19-88:6; Ex. C-4 at ¶2. Under these circumstances, the documentary evidence submitted by the parties regarding inventorship is far from conclusive.

Moreover, even if IBM could establish that Follendore is at least a potential co-inventor of the technology in the '702 patent family, IBM cannot prevail on its Motion for Summary Judgment unless it can prove both materiality and intent to deceive the PTO by clear and convincing evidence. At this stage of the litigation, however, IBM has not done so. First, while Shanton and his attorneys did not specifically list Follendore's '707 patent as prior art, the specification of the '702 patent clearly references the claims in Follendore's '707 patent application, stating:

A system such as that described above is disclosed in

U.S. patent application Ser. No. 08/009,741, the
specification of which is incorporated by reference
herein.

Ex. A3 at 2:58-61. The Federal Circuit has consistently held that

disclosure of a reference to the PTO within the specification of a

patent application is indicative of lack of intent to deceive.

See, e.g., Bayer A.G. v. Housey Pharm., Inc., 128 Fed. Appx. 767,

771 (Fed. Cir. 2005); Andrew Corp. v. Gabriel Elecs., Inc., 847

F.2d 819, 823-24 (Fed. Cir. 1998); Vandenberg v. Dairy Equip. Co.,

740 F.2d 1560, 1568 (Fed. Cir. 1984). And while the disclosure of

Follendore in the '702 patent application could perhaps have been

more prominent, it did not go unnoticed by the PTO Examiner.

Rather, the Examiner's handwritten initials and notations suggest

that he actually looked up and reviewed the Follendore patent

application (which eventually became the '707 patent) before taking

action on the '702 patent application. See Ex. A-7 at

IBMTS00000200 (showing Examiner's initials and his handwritten

insertion of the Jan. 27, 1993 filing date of Follendore's patent

application).

Finally, TecSec has at least a plausible argument that Shanton

and his attorneys did not fail to disclose Follendore out of a

desire to deceive the PTO, but rather because they genuinely

believed that Follendore's patent application described different

technology and thus was not invalidating prior art. In fact, the

'702 patent application identifies several important distinctions

between the technology described therein and Follendore's '707

25

patent. Specifically, the '702 patent application states that in contrast to the '707 patent invention, it provides "a system that can limit access on an *object* level," such that "[a]ccess could be specified on an object-by-object basis, and objects could be embedded within other objects, providing an access hierarchy for users." Ex. A-1 at 2:58-66 (emphasis added). By contrast, the '707 patent appears to provide only for secure encryption at the *file* or document level, and does not claim the ability to encrypt, label, or control data "objects," which could include both files and sub-files.

Accordingly, intent to deceive the PTO Examiner is not the "single most reasonable inference able to be drawn from the evidence" on the record at this time, and summary judgment for IBM on its affirmative defense of inequitable conduct is therefore inappropriate. Star Scientific, 537 F.3d at 1366-67; see also Leviton, 606 F.3d at 1353 (concluding that "inequitable conduct cannot be found where the patentee offers a plausible, good faith explanation for why the nondisclosed information was not cited to the PTO." (internal citations and quotations omitted)). At the very least, genuine factual issues preclude a grant of summary judgment here, where credibility determinations must be made to determine the proper weight to accord to the "he said; he said" testimony of Follendore and Shanton, both of whom claim exclusive inventorship of the same invention. For those reasons, both IBM's and TecSec's motions for summary judgment regarding IBM's

26

allegations of inequitable conduct in the prosecution of the '702 family of patents will be denied, and that issue will proceed to trial.

C. IBM's Motion for Summary Judgment of Invalidity of the '433 (XML) Patent

IBM next moves for summary judgment of invalidity with respect to the '433 (XML) patent. Specifically, IBM argues that claims 1-8 and 10-11 of that patent are anticipated by U.S. Patent No. 7,010,681 ("Fletcher"), and that claims 9 and 12 of the XML patent are invalid for failure to comply with the written description requirement of 35 U.S.C. § 112. See Def.'s Mot. for Summ. J. at 31-40. Neither argument is persuasive, and IBM's Motion for Summary Judgment on the '433 patent will therefore be denied.

1. Alleged Anticipation by Prior Art (Fletcher)

To meet the requirements of patentability, an alleged invention must be new. See C.R. Bard, Inc. v. M3 Sys., Inc., 157 F.3d 1340, 1349 (Fed. Cir. 1998). In fact, under the plain text of 35 U.S.C. § 102(e), an applicant is not entitled to a patent for an invention if "the invention was described in . . . a patent granted on an application . . . filed in the United States before the invention by the applicant." Accordingly, if a prior art reference discloses the same invention as a challenged patent, the challenged patent may be held invalid because of that prior art. See Celeritas Tech., Ltd. v. Rockwell Int'l Corp., 150 F.3d 1354, 1361 (Fed. Cir. 1998).

A patent will only be declared invalid due to anticipation if "each and every limitation" of the patent is found "either expressly or inherently in a single prior art reference." IPXL Holdings, L.L.C. v. Amazon.com, Inc., 430 F.3d 1377, 1381 (Fed. Cir. 2005) (citation omitted). The prior art reference must disclose all of the claim elements arranged or combined in the same way as recited in the challenged patent. See NetMoneyIN, Inc. v. VeriSign, Inc., 545 F.3d 1359, 1369 (Fed. Cir. 2008). Moreover, the prior art reference must "clearly and unequivocally disclose the claimed [invention] . . . without *any* need for picking, choosing, and combining various disclosures not directly related to each other by the teachings of the cited reference." Sanofi-Synthelabo v. Apotex, Inc., 89 USPQ2d 1370, 1375 (Fed. Cir. 2008) (emphasis in original). Finally, issued patents are entitled to a presumption of validity by virtue of their approval by the PTO, and a challenger thus bears a heavy burden of proving invalidity by clear and convincing evidence. See Nat'l Presto Indus., Inc. v. West Bend, Co., 76 F.3d 1185, 1188 (Fed. Cir. 1996).

In this case, IBM asserts that TecSec's '433 patent is invalid because claims 1-8 and 10-11 are anticipated by the prior art disclosed in U.S. Patent No. 7,010,681 ("Fletcher"). As a threshold matter, Fletcher does pre-date the '433 patent. The '433 patent was issued on February 17, 2004, from an initial application filed on October 20, 1999. See Ex. B1. TecSec contends, however, that the invention described in the '433 patent was first conceived

in or about April 1999. See Ex. B3 at 4. The earliest possible date for the identification of invalidating prior art is therefore April 1999. The patent application that led to Fletcher was filed on January 29, 1999, see Ex. B2, meaning that it qualifies as potential prior art under 35 U.S.C. § 102(e), regardless of whether the Court accepts the April 1999 or the October 20, 1999 date of invention for the '433 patent.

IBM cannot, however, carry its weighty burden to demonstrate by clear and convincing evidence that Fletcher anticipates each of the challenged claims of the '433 patent. Like the '433 patent, Fletcher deals, in a general sense, with the interrelation between encryption and Extensible Markup Language ("XML") tags. See id. However, the asserted claims of the '433 patent and Fletcher teach fundamentally different technical approaches to achieving the desired result, and the latter is therefore not invalidating prior art for the former.

TecSec's '433 patent describes "[a] secure accounting and operational method," designed to address the situation that "[a]s more businesses adopt electronic systems and interact electronically with vendors and customers, the ability to reliably audit . . . transactions is greatly diminished." Ex. B1 at Abstract, 2:50-53. The '433 patent provides one solution to that problem by allowing for the recording of input and output data as encrypted objects, thereby "ensur[ing] data integrity." Id. at 1:42-44. To achieve that goal, the '433 patent teaches formatting

data objects with an Extensible Markup Language, which "uses tags to label data objects as to meaning." Id. at 5:13-27. The '433 patent uses those tags, at least in part, to select a security level or cryptographic scheme for the system's output objects, which can then be encrypted according to the schemes determined by each object's XML tag. See id. at 5:61-67; 6:16-21. The final encrypted objects are then either passed to, or stored for, appropriate persons, devices, or other systems to which access has been granted. Id. at 5:67-6:3; 6:20-24. According to TecSec, the XML-based selection process disclosed in the '433 patent thereby provides the flexibility needed to encrypt objects using tailored, element-specific encryption algorithms for different data objects. See Pl. TecSec's Brief in Opp. to IBM's Mot. for Summ. J. of Invalidity and Inequitable Conduct ("Pl.'s Br. in Opp.") at 40.

Fletcher is also directed to a method or system for using XML tags, in part, to select encryption levels applied to a document. See Ex. B2 (Abstract). However, in Fletcher, unlike in the '433 patent, those tags are used to delimit certain sections of a file or document for filtering or *removal* based on defined security parameters.[7] See id. at 5:52-65. Once those sections have been removed, the entirety of the remaining document is then encrypted - and can later be decrypted - in a monolithic way, without further differentiation as to the remaining tagged objects contained

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[7] In Fletcher, network middleware determines the security level, and encryption levels are determined and applied based on a defined policy. Ex. B2 at 2:46-47; 2:58-60.

therein. See, e.g., id. at 6:10-35. The end result is that when a

user requests access to a document, the system provides the user

with access to an encrypted version of only *part* of that document,

depending upon the relevant security levels and the access

permissions granted to that user. See id. at 3:6-12 (teaching that

"sections within a document are filtered out if (a) the user is not

authorized to see them or (b) the device is not sufficiently secure

to receive them. The remaining content is encrypted using the

selected encryption mechanism.").

Fletcher and the '433 patent are thus different from one

another in important ways. The method described in Fletcher

achieves the desired level of data security at the file or document

level, by creating a new, but incomplete, version of the original

file or document based upon the types of information that the user

is entitled to access, and then encrypting that new file or

document as a whole for transmission or storage. In contrast, the

asserted claims of the '433 patent require the selection and

labeling of individual objects with XML tags, such that different

portions of a file or document can be encrypted and decrypted at

various hierarchical levels, while the underlying file or document

itself remains intact. In sum, the '433 patent selects XML

elements and encrypts at least portions thereof according to

various XML tags, while Fletcher functions from the opposite

perspective by removing, or *de-selecting*, certain XML elements and

then encrypting the remainder of the file or document in its

31

entirety. The claimed processes may thus achieve similar results, but they do so through materially different methods.[8] IBM has therefore failed to prove by clear and convincing evidence that Fletcher is invalidating prior art for the '433 patent under 35 U.S.C. § 102(e). Rather, the Court finds as a matter of law that Fletcher is not invalidating prior art for the '433 (XML) patent, and summary judgment will thus be granted in favor of TecSec on that issue.

2. Alleged Failure to Comply with Written Description Requirement

IBM also argues that claims 9 and 12 of the '433 patent are invalid for failure to comply with the written description requirement of 35 U.S.C. § 112. Specifically, paragraph 1 of 35 U.S.C. § 112 requires that "[t]he specification shall contain a written description of the invention," such that a person of ordinary skill in the art would recognize that the inventor possessed the claimed invention at the time of the original filing. 35 U.S.C. § 112 at ¶ 1; see also Moba, B.V. v. Diamond Automation, Inc., 325 F.3d 1306, 1320-21 (Fed. Cir. 2003).

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[8] The Court expresses no opinion as to whether Fletcher or the '433 patent presents the better method. As TecSec notes, the '433 patent has some advantages over Fletcher because it allows for more selective encryption of individual elements. See Pl.'s Br. in Opp. at 41-42. However, in the process, the method disclosed in the '433 patent may render itself more vulnerable than Fletcher, because while Fletcher affirmatively *removes* the portions of the document that a given user is not entitled to access, the '433 patent simply relies on hierarchical levels of encryption to achieve data security. For present purposes, however, it does not matter which patented process is superior; all that matters is that the patents are different.

The purpose of the written description requirement is to prevent overreaching by the applicant, and to ensure that the public and future inventors have meaningful notice of the scope of the claimed invention. See Univ. of Rochester v. G.D. Searle & Co., 358 F.3d 916, 920 (Fed. Cir. 2004); see also ICU Med, Inc. v. Alaris Med. Sys., Inc., 558 F.3d 1368, 1377 (Fed. Cir. 2009). However, upon issuance, a patent is presumed to be valid and to comply with the written description requirement. See Intirtool, Ltd. v. Texar Corp., 369 F.3d 1289, 1294 (Fed. Cir. 2004). Accordingly, a challenger has the burden of proving by clear and convincing evidence that a patent does not contain an adequate written description to support its claims. Id.; see also Invitrogen Corp. v. Clontech Labs, Inc., 429 F.3d 1052, 1072 (Fed. Cir. 2005).

In this case, IBM devotes a mere two paragraphs of its 60-page Motion for Summary Judgment to the argument that the '433 patent specification lacks a sufficient written description of claims 9 and 12. IBM's argument rests exclusively on the fact that claims 9 and 12 refer, inter alia, to "another Extensible Markup Language," Ex. B1 at 8:34-35; 8:58-59 (emphasis added), but "nothing in the '433 patent application, as filed, disclosed or suggested more than one Extensible Markup Language." See Def.'s Mot. for Summ. J. at 40-41.

In the context of the '433 patent, however, IBM's argument reduces to mere semantic quibbling. In fact, the evidence in this

case, particularly when viewed in the light most favorable to TecSec, indicates that the '433 patent fully complies with the written description requirement. After all, the entire point of *Extensible* Markup Languages is that their syntax can be extended or modified to suit various purposes and applications. See Ex. A-56 (Microsoft Computer Dictionary, 4th Ed.) at 175 (defining "extensible language" as "A computer language that allows the user to extend or modify the syntax and semantics of the language."). And the '433 patent specification makes clear that the patent relies on the inherent extensibility of XML languages, such that the claimed method could be compatible with multiple XML languages. See Ex. B1 at 5:18-32 (describing the virtues of XML data tags as a means of migrating between different languages and syntaxes).

The precise XML languages are therefore immaterial to the invention claimed by the '433 patent, as is IBM's manufactured distinction between the phrases "another Extensible Markup Language" and "the Extensible Markup Language." See Def.'s Mot. for Summ. J. at 40 (comparing Ex. B1 at 8:34-35; 8:58-59 to Ex. B1 at 5:14-16). The crucial point is that the '433 patent claims the ability to *migrate* between languages and syntaxes, and a person of ordinary skill in the art would therefore have understood the '433 patent to provide ample written description of the invention. Significantly, the PTO examiner evidently agreed that claims 9 and 12 provided sufficient written description, and therefore approved the patent. IBM's half-

hearted efforts to undermine the validity of claims 9 and 12 therefore fail, and summary judgment will in fact be granted in TecSec's favor because IBM cannot meet its burden of showing insufficient support for claims 9 and 12 by clear and convincing evidence.

D. IBM's Motion for Summary Judgment of Invalidity of the '448 (Parallel Processor) Patent

IBM's final argument in its Motion for Summary Judgment is that claims 1-18 of TecSec's '448 (Parallel Processor) patent are invalid due to prior art. Specifically, IBM moves for summary judgment that U.S. Patent No. 7,600,131 ("Krishna") discloses or anticipates all of the limitations of claims 1-18 in the '448 patent, and that the '448 patent is therefore invalid and unenforceable pursuant to 35 U.S.C. § 102(e).

The Krishna patent application was filed on July 6, 2000, meaning that it pre-dates the '448 patent, which was issued on June 27, 2006, based upon an application filed on December 5, 2001. See Ex. C1; Ex. C2. TecSec contends that the subject matter of the '448 patent was invented in or about September 2001. See Ex. B3 at 4. However, even using TecSec's alleged invention date of September 2001, Krishna could potentially qualify as invalidating prior art under 35 U.S.C. § 102(e).

Additionally, there are some superficial similarities between the two patents. The '448 patent is directed to "context-oriented cryptographic processing in a parallel

35

processing environment." Ex. C1 at 1:38-40. In particular,
claims 1-18 of the '448 patent describe and claim a specific
method for cryptographic processing of input data in a parallel
processing environment to increase the speed of the encryption or
decryption process. The '448 patent thus claims that its method
meets "a need for an efficient manner of effectuating
cryptographic processing." Id. at 2:2-3. Similarly, the Krishna
patent describes an "architecture for a cryptography accelerator
chip" that "enables parallel processing of packets through a
plurality of cryptography engines." Ex. C2 at 2:12-18. Krishna
also claims that its architecture "allows significant performance
improvements over previous prior art designs," and that it is
configured "to efficiently process encryption/decryption of data
packets." Id. (Abstract).

However, a closer review of the methods described in Krishna
and the '448 patent reveals that IBM cannot carry its burden of
proving by clear and convincing evidence that Krishna is
invalidating prior art for the '448 patent. In fact, the two
patents appear to work in subtly, but importantly, different
ways.

First, the '448 patent discloses a system and method that
uses something called a "format filter" to extract "control
data," such as a document header, and "main data," such as
document text, from the original "input data" (which includes
both the control and main data), and then uses cryptographic

parameters that were set based on the control data to direct the distribution of the main data to each of a number of different processors for encryption or decryption. See Ex. C1 at 2:20-42; 3:48-4:52; Fig. 1, claim 1. The simultaneous processing of the main data in separate processors allows for more efficient encryption and decryption of large amounts of data, and at the conclusion of the process, the data output from each processor is then recombined to provide the integrated "output data." Id. As described by TecSec, the separation of the control and main data enables the processors to work with a relatively lightened load as they encrypt or decrypt the main data, without sacrificing data content or security. See Pl.'s Br. in Opp. at 49-50. The "format filter" that performs that separation function is thus crucial to the operation of the '448 patent, which is why claims 1-18 all require a "format filter adapted to extract control data and main data from the input data." See Ex. C1.

Like the '448 patent, the Krishna patent also describes a system for using multiple processors to encrypt or decrypt data simultaneously. However, in contrast to the '448 patent, Krishna does not utilize a format filter, nor does it extract control data and main data from the original input data. IBM claims that something called an "Input FIFO 302" functions as a "format filter," and that it is adapted to extract header information from packets of data, just as the '448 patent extracts control and main data from input data. See Def.'s Mot. for Summ. J. at

37

46-48. However, the method disclosed in Krishna in fact merely uses the "input FIFO" as a buffer, which holds data in place until a processor is available to begin processing it. In short, as Krishna receives packets of data, it simply sends the next packet to the next available processor, in a "round-robin fashion," without regard to what is in the packet. See Ex. C2 at 6:21-41 (describing the "round-robin" and "per flow ordering" system used by Krishna). Indeed, far from functioning as a system for extraction of various types of data, the record evidence indicates that the term "FIFO" in Krishna's "Input FIFO 302" means nothing other than "First In, First Out." See Ex. B-9 at 206:21-24 ("Q: What is a FIFO? A: FIFO is a hardware term for 'first in, first out' buffer."). The "input FIFO" in Krishna therefore does not perform the functionality that IBM claims; instead, it just ensures that the data packets remain in order, and that the first packet of data that enters the buffer is the first packet to be sent out of the buffer for processing.

Moreover, the independent claims of the '448 patent also require the presence of something called a "control unit," which must forward a "control parameter" and a "cryptographic parameter" to each of the plurality of processors. See, e.g., Ex. C1 at 6:32-35. Specifically, the '448 patent repeatedly refers to the step of "forwarding, based at least in part on the control data, at least one respective control parameter and at least one respective cryptographic parameter to each of the

plurality of processors." Id. at 7:8-11. Claims 1-9 of the '448
patent specifically require that the "control unit" perform that
function. Id. at 6:32-35. However, IBM has not identified
structures in Krishna that function as a "control unit," or a
"control parameter," at least as disclosed and configured in the
'448 patent. IBM claims that something in the Krishna reference
called a "u32 byteCount" could serve the function of the control
parameter, while certain packet classifiers or "SA Auxiliary
structures" could function as "control units," see Def.'s Mot.
for Summ. J. at 48-50, but IBM utterly fails to explain how
Krishna discloses *forwarding* the control parameter from the
control unit. Accordingly, Krishna does not disclose the
explicit configuration required by the '448 patent claims, and
IBM's argument that Krishna is invalidating prior art therefore
fails for a second, independent reason. See Net MoneyIN, Inc.,
545 F.3d at 1371 (holding that if alleged prior art does not
disclose "not only all of the limitations claimed but also all of
the limitations arranged or combined in the same way as recited
in the claim, it cannot be said to prove prior invention of the
thing claimed, and thus, cannot anticipate under 35 U.S.C.
§ 102"). Accordingly, IBM cannot meet its burden to establish by
clear and convincing evidence that Krishna is invalidating prior
art for the '448 patent under 35 U.S.C. § 102(e), and IBM's
motion for summary judgment on that point will therefore be
denied.

IV. Conclusion

For all these reasons, the term "object" in the '702 (DCOM) family of patents will be construed to mean "any distinct, separate entity." Defendant IBM's Motion for Summary Judgment of Inequitable Conduct and Invalidity [Dkt. No. 392] will be denied in all respects by an Order to be issued with this Memorandum Opinion, and plaintiff TecSec's Motion for Summary Judgment on Defendant's Affirmative Defenses of Invalidity and Inequitable Conduct [Dkt. No. 399] will be denied in part as to the issues of the inventorship dispute regarding the '702 (DCOM) patents and the alleged inequitable conduct in the prosecution of the '702 patent family. The Court will rule on the remaining issues raised in TecSec's Motion for Summary Judgment in a later Memorandum Opinion.

Finally, although TecSec did not affirmatively move for summary judgment in its favor regarding IBM's affirmative defenses of invalidity of the '433 patent due to anticipation by Fletcher and failure to comply with the written description requirement, or IBM's affirmative defense of invalidity of the '448 patent due to anticipation by Krishna, the Court finds as a matter of law that IBM cannot meet its burden of proof on those affirmative defenses, and summary judgment will therefore be granted in TecSec's favor on those matters.

Entered this 12ᵗʰ day of January, 2011.

Alexandria, Virginia

/s/

Leonie M. Brinkema
United States District Judge

40